

MARK L. WHITAKER (admitted *Pro Hac Vice*)
 MWhitaker@mofo.com
 DAVID D. CROSS (admitted *Pro Hac Vice*)
 DCross@mofo.com
 DANIEL P. MUINO (CA BAR NO. 209624)
 DMuino@mofo.com
 BRADLEY S. LUI (CA BAR NO. 143088)
 BLui@mofo.com
 MARY PRENDERGAST (CA BAR NO. 272737)
 MPrendergast@mofo.com
 FAHD H. PATEL (admitted *Pro Hac Vice*)
 FPatel@mofo.com
 MORRISON & FOERSTER LLP
 2100 L Street, NW, Suite 900
 Washington, District of Columbia 20037
 Telephone: (202) 887-1500
 Facsimile: (202) 887-0763

Attorneys for Plaintiffs
 TERADATA CORPORATION,
 TERADATA US, INC., and
 TERADATA OPERATIONS, INC.

BRYAN WILSON (CA BAR NO. 138842)
 BWilson@mofo.com
 MORRISON & FOERSTER LLP
 755 Page Mill Road
 Palo Alto, California 94304-1018
 Telephone: (650) 813-5600
 Facsimile: (650) 494-0792

WENDY RAY (CA BAR NO. 226269)
 WRay@mofo.com
 MORRISON & FOERSTER LLP
 707 Wilshire Boulevard, Suite 6000
 Los Angeles, California 90017-3543
 Telephone: (213) 892-5200
 Facsimile: (213) 892-5454

JACK W. LONDEN (CA BAR NO. 85776)
 JLonden@mofo.com
 MORRISON & FOERSTER LLP
 425 Market Street
 San Francisco, California 94105
 Telephone: (415) 268-7000
 Facsimile: (415) 268-7522

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

TERADATA US, INC.,

Plaintiff,

and

TERADATA CORPORATION and
 TERADATA OPERATIONS, INC.,

Plaintiffs/Counterclaim-Defendants,

v.

SAP SE,

Defendant/Counterclaim-Plaintiff,

and

SAP AMERICA, INC. and
 SAP LABS, LLC,

Defendants.

Case No. 3:18-cv-03670-WHO (JCS)

**TERADATA'S NOTICE OF MOTION
 AND MOTION FOR SUMMARY
 JUDGMENT OF (1) INVALIDITY OF
 U.S. PATENT NO. 8,214,321 AND (2)
 LIMITATION ON DAMAGES DUE
 TO FAILURE TO MARK**

Judge: William H. Orrick
 Date: October 13, 2021
 Time: 2:00 pm
 Location: Courtroom 2, 17th Floor or
 via Video Conference

TABLE OF CONTENTS

	<u>Page</u>
NOTICE OF MOTION AND MOTION	1
MEMORANDUM OF POINTS AND AUTHORITIES	1
I. INTRODUCTION	1
II. LEGAL STANDARD FOR SUMMARY JUDGMENT	2
III. ARGUMENT	2
A. The '321 Patent Is Directed to Patent-Ineligible Subject Matter	2
1. Overview of the '321 Patent	2
2. Abstract Ideas are Not Eligible for Patent Protection	6
3. The '321 Patent Is Directed to an Abstract Idea	7
a. Courts Have Found that Collecting, Organizing, and Presenting Information Is an Abstract Idea	7
b. The Claims of the '321 Patent Involve Collecting, Organizing, and Presenting Information	8
c. The '321 Patent Does Not Improve Computer Technology	10
4. The '321 Patent Lacks an Inventive Concept	12
a. The Claims Recite Well-Understood, Routine, Conventional Database Features	13
b. The Remaining, Functional Claim Limitations Are In The Realm Of Abstract Ideas	14
B. SAP Cannot Recover Damages for the '179 and '421 Patents Before May 21, 2019	17
IV. CONCLUSION	19

TABLE OF AUTHORITIES

Page(s)

Cases

<i>ActiveVideo Networks, Inc. v. Verizon Communs., Inc.</i> , 694 F.3d 1312 (Fed. Cir. 2012).....	19
<i>Alice Corp. Pty. Ltd. v. CLS Bank Int’l</i> , 573 U.S. 208 (2014).....	6, 7, 8, 12
<i>Am. Med. Sys., Inc. v. Med. Eng’g Corp.</i> , 6 F.3d 1523 (Fed. Cir. 1993).....	19
<i>Arctic Cat Inc. v. Bombardier Rec. Prods. Inc.</i> , 950 F.3d 860 (Fed. Cir.), <i>cert. dismissed</i> , 141 S. Ct. 753 (2020)	19
<i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360 (Fed. Cir. 2018), <i>cert. denied</i> , 140 S. Ct. 911 (2020)	6
<i>BSG Tech LLC v. Buyseasons, Inc.</i> , 899 F.3d 1281 (Fed. Cir. 2018).....	7, 14
<i>Contour IP Holding, LLC v. GoPro, Inc.</i> , No. 3:17-cv-04738-WHO, 2020 U.S. Dist. LEXIS 158184 (N.D. Cal. Aug. 31, 2020)	17
<i>East Coast Sheet Metal Fabricating Corp. v. Autodesk, Inc.</i> , No. 12-cv-517, 2015 U.S. Dist. LEXIS 5536 (D.N.H. Jan. 15, 2015), <i>aff’d</i> , 645 Fed. App’x 992 (Fed. Cir. 2016)	9
<i>Elec. Power Grp. LLC v. Alston S.A.</i> , 830 F.3d 1350 (Fed. Cir. 2016).....	7, 8, 10, 14
<i>Enfish, LLC v. Microsoft Corp.</i> , 822 F.3d 1327 (Fed. Cir. 2016).....	10, 12
<i>Fujifilm Corp. v. Motorola Mobility LLC</i> , No. 12-cv-03587-WHO, 2015 U.S. Dist. LEXIS 46106 (N.D. Cal. Apr. 8, 2015).....	19
<i>Intellectual Ventures I LLC v. Capital One Fin. Corp.</i> , 850 F.3d 1332 (Fed. Cir. 2017).....	6, 8, 9
<i>Intellectual Ventures I LLC v. Erie Indemnity Co.</i> , 850 F.3d 1315 (Fed. Cir. 2017).....	8
<i>Intellectual Ventures I LLC v. Symantec Corp.</i> , 838 F.3d 1307 (Fed. Cir. 2016).....	7, 11

1	<i>Internet Patents Corp. v. Active Network, Inc.</i> ,	
2	790 F.3d 1343 (Fed. Cir. 2015).....	7
3	<i>Mortgage Grader, Inc. v. First Choice Loan Services Inc.</i> ,	
4	811 F.3d 1314 (Fed. Cir. 2016).....	2
5	<i>Smart Authentication IP LLC v. Elec. Arts, Inc.</i> ,	
6	402 F. Supp. 3d 842 (N.D. Cal. 2019)	12
7	<i>Synopsys, Inc. v. Avatar Integrated Sys.</i> ,	
8	No. 20-cv-04151-WHO, 2020 U.S. Dist. LEXIS 212877	
9	(N.D. Cal. Nov. 12, 2020).....	11
10	<i>In re TLI Commc'ns LLC Patent Litig.</i> ,	
11	823 F.3d 607 (Fed. Cir. 2016).....	10
12	<i>Unwired Planet, LLC v. Apple Inc.</i> ,	
13	No. 13-cv-04134-VC, 2017 U.S. Dist. LEXIS 20935 (N.D. Cal. Feb. 14, 2017)	19
14	<i>Voip-Pal.com, Inc. v. Apple, Inc.</i> ,	
15	No. 12-CV-06216-LHK, 411 F. Supp. 3d 926 (N.D. Cal. 2019),	
16	<i>aff'd</i> , 828 Fed. Appx. 717 (Fed. Cir. 2020).....	7
17	Statutes and Other Authorities	
18	35 U.S.C.	
19	§ 101.....	<i>passim</i>
20	§ 287.....	1, 2, 18, 19
21	Fed. R. Civ. P.	
22	56.....	2, 17

NOTICE OF MOTION AND MOTION

NOTICE IS HEREBY GIVEN that on October 13, 2021, at 2:00 p.m., or as soon thereafter as the matter may be heard, before the Honorable William H. Orrick, District Judge of the United States Court for the Northern District of California, San Francisco Division, located at 450 Golden Gate Avenue, San Francisco, CA 94102, Plaintiffs/Counterclaim-Defendants Teradata Corporation and Teradata Operations, Inc. and Plaintiff Teradata US, Inc. (collectively, “Teradata”) will and hereby do move for summary judgment against Defendants/Counterclaim-Plaintiff SAP SE’s (collectively, “SAP”) counterclaims asserting the infringement of U.S. Patent Nos. 8,214,321 (“’321 patent”), 7,617,179 (“’179 patent”), and 9,626,421 (“’421 patent”).

The claims of the ’321 patent are directed to patent-ineligible subject matter under 35 U.S.C. § 101 and are therefore invalid. Accordingly, SAP’s counterclaims asserting that Teradata infringes the claims of the ’321 patent should be dismissed. Additionally, SAP failed to give notice to the public that certain SAP products practice the claims of the ’179 and ’421 patents by marking those products with its patent numbers. Thus, under 35 U.S.C. § 287, SAP is not entitled to damages for alleged infringement of those patents before May 19, 2019, the date SAP first informed Teradata of its infringement allegations.

MEMORANDUM OF POINTS AND AUTHORITIES

I. INTRODUCTION

Teradata moves for summary judgment against SAP’s counterclaims alleging infringement of the ’321 patent (ECF No. 124-1) because the asserted claims are not directed to patent-eligible subject matter under 35 U.S.C. § 101. The ’321 patent is directed to the unpatentable, abstract idea of associating (“mapping”) database tables and online analytical processing [OLAP] cubes with respective classes for use with application programs. This “mapping” is simply a form of organizing information, a type of activity that courts have repeatedly held to be abstract and ineligible for patent protection. Moreover, the claims of the ’321 patent lack an inventive concept because they place no meaningful limitations on the abstract idea. Instead, the claims recite well-known elements such as database tables, OLAP cubes, application software, and processing and analyzing data. The recitation of conventional

1 computer software and generic, functional limitations cannot transform a patent-ineligible
2 abstract idea into a patent-eligible invention.

3 Teradata also moves for summary judgment against SAP's damages claims for the '179
4 and '421 patents (ECF Nos. 124-3 and 124, respectively) for periods before May 21, 2019.
5 SAP's disclosures and discovery responses establish that it sold products that practice the '179
6 and '421 patents but failed to mark its products with its patent numbers or otherwise give notice
7 to the public that its products were patented in accordance with 35 U.S.C. § 287. Thus, even if
8 SAP could prove liability, SAP would not be entitled to damages for any infringement before
9 May 21, 2019, the date SAP gave notice to Teradata of its infringement allegations.

10 **II. LEGAL STANDARD FOR SUMMARY JUDGMENT**

11 Summary judgment is appropriate when "there is no genuine dispute as to any material
12 fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). "[T]he
13 'mere existence of some alleged factual dispute between the parties will not defeat an otherwise
14 properly supported motion for summary judgment.'" *Mortgage Grader, Inc. v. First Choice Loan*
15 *Services Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016) (quoting *Anderson v. Liberty Lobby, Inc.*, 477
16 U.S. 242, 247-248 (1986)). "Instead, summary judgment will not lie if the dispute about a
17 material fact is genuine, that is, if the evidence is such that a reasonable jury could return a
18 verdict for the nonmoving party." *Id.* (internal quotation marks and citation omitted).

19 **III. ARGUMENT**

20 **A. The '321 Patent Is Directed to Patent-Ineligible Subject Matter**

21 The '321 patent improperly attempts to claim an abstract idea, and no "inventive concept"
22 transforms it into patent-eligible applications. The claims are therefore invalid for lack of patent-
23 eligible subject matter.

24 **1. Overview of the '321 Patent**

25 The '321 patent is entitled "Systems and Methods for Data Processing." SAP's technical
26 expert describes the '321 patent as follows:

27 The '321 patent relates to ways to organize the tables and cubes
28 used in databases so that they can be more easily and efficiently
recognized and accessed. At a high level this organization is

1 accomplished by assigning a table or cube to a particular class.
2 These classes serve to group data structures storing related data, so
an application can access the structures together.

3 Rebuttal Expert Report of Dr. David Maier on the Validity of SAP SE's Patents, (Swoopes Decl.
4 Ex. A) ¶ 683.

5 The '321 patent states that it "relates to computer-implemented databases and data
6 processing systems and methods," including "data warehouse computer systems and online
7 analytical processing (OLAP)." '321 patent, 1:7–11. The patent describes application programs
8 that process and analyze "classes" of "database tables" and "OLAP cubes." *Id.*, 3:25–27,
9 4:59–62. This Court construed "online analytical processing cube" to mean "[a] data structure
10 designed to store multidimensional data, where data to be stored in the data structure is provided
11 by online analytical processing." Claim Construction Order (July 15, 2020), ECF No. 279 at 23.

12 Figure 3, reproduced below, shows a representative embodiment of the disclosed data
13 warehouse system. It depicts capabilities for "storage," containing database tables and OLAP
14 cubes, and "processing," containing mapping tables (324 and 334) for mapping database tables to
15 database table classes and for mapping OLAP cubes to OLAP cube classes. The "processing"
16 area of Figure 3 also shows application programs 320 and an OLAP component 330.

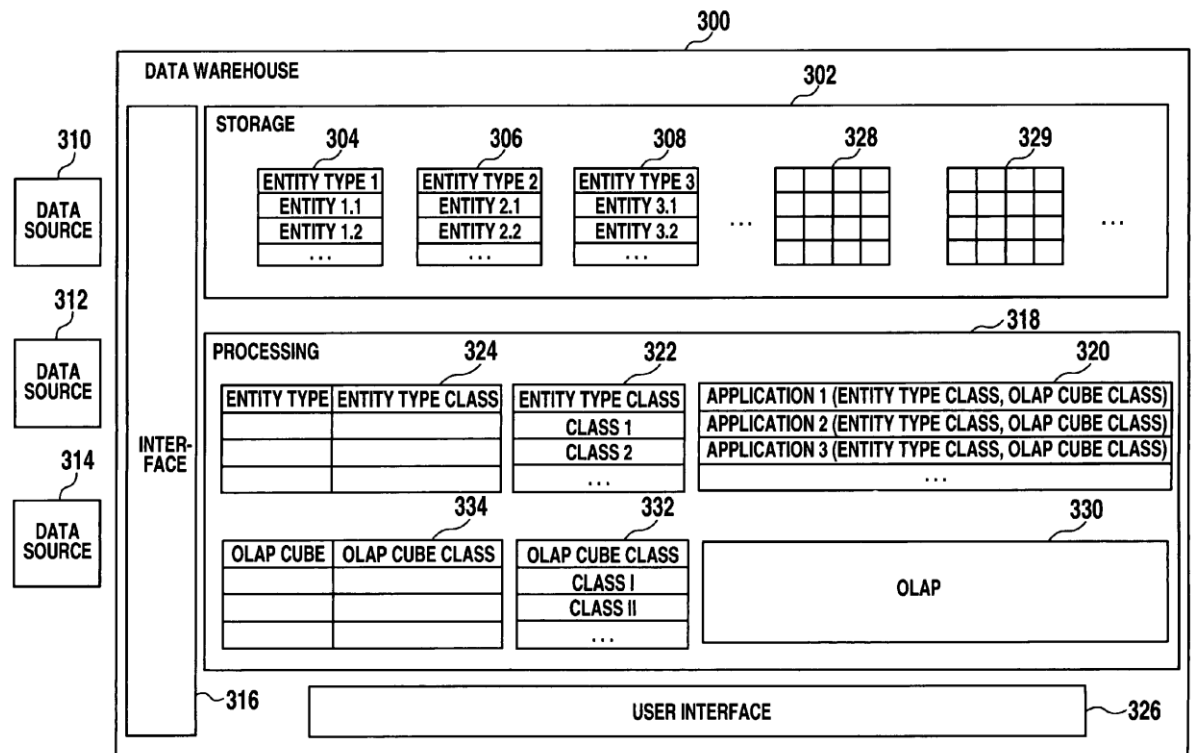
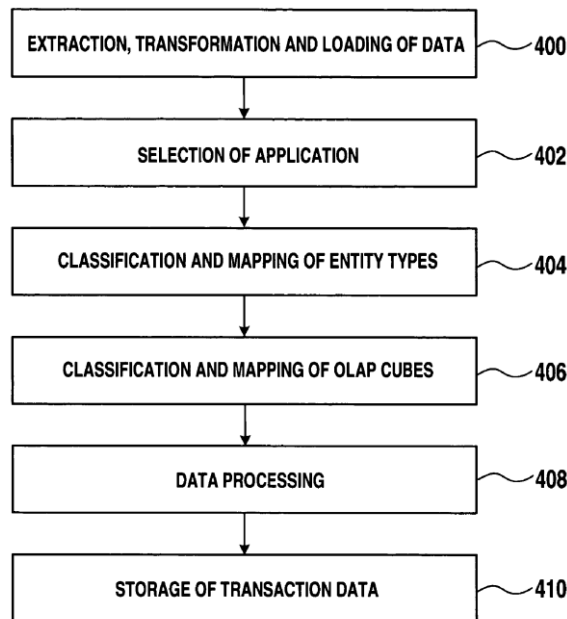
**FIG. 3**

Figure 4 depicts a flowchart consistent with an embodiment of the alleged invention.

**FIG. 4**

In summary, data is imported into the data warehouse; an application is provided; database tables and OLAP cubes are classified (mapped) to classes; data in the tables and OLAP cubes are

1 processed; and the results are stored or shown to a user. (*See* '321 patent, 6:1–28.)

2 SAP has asserted claims 1, 2, and 4. ECF No. 461 at 1. Claim 1 below is representative:

3 1. A data processing method comprising:

4 [1.a] providing a set of database tables in a data warehouse, each
5 database table being assigned to an entity type and storing entities
6 of its entity type;

7 [1.b] providing a set of online analytical processing cubes in a data
8 warehouse, each online analytical processing cube specifying a
9 layout for transactional data storage;

10 [1.c] providing at least one application program for processing at
11 least one class of database tables and at least one class of online
12 analytical processing cubes;

13 [1.d] mapping a sub-set of the set of database tables to the at least
14 one class of database tables, the sub-set of database tables
15 comprising database tables of one or more entity types;

16 [1.e] mapping a sub-set of the set of online analytical processing
17 cubes to the at least one class of online analytical processing cubes;

18 [1.f] invoking an online analytical processing component to fill the
19 online analytical processing cubes with transactional data;

20 [1.g] processing the entities stored in the sub-set of database tables
21 and the transactional data stored in the sub-set of online analytical
22 processing cubes by the application program; and

23 [1.h] providing analysis of the entities and the transactional data
24 processed by the application program to a user.

25 Claim 2 depends on claim 1, but it requires “a set of application programs” that is “adapted to
26 process a set of classes of database tables and [OLAP] cubes.” Independent claim 4 is a system
27 claim that corresponds to the limitations in claim 1. Claim 4 requires “mapping table[s] for
28 mapping” tables to classes and OLAP cubes to classes.

29 The claims use broad, generic terminology for the key elements. For example, they do not
30 require database tables with a particular structure or design. Nor do the claims require specific
31 application software; during claim construction, the parties agreed that “application program” in
32 the '321 patent means “software for processing at least one class of database tables and at least
33 one class of [OLAP] cubes.” Joint Claim Construction and Prehearing Statement Pursuant to
34 Patent L.R. 4-3, ECF No. 206 at 2. Nor do the claims recite specific algorithms for “mapping”

1 tables or OLAP cubes to classes, for processing data in tables or OLAP cubes, or for providing
 2 analysis to a user. And, as explained below, each of these elements was known in the art at the
 3 time of the filing of the application that issued as the '321 patent.

4 **2. Abstract Ideas are Not Eligible for Patent Protection**

5 Abstract ideas, without more, are not patentable under 35 U.S.C. § 101. *Alice Corp. Pty.*
 6 *Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217-18 (2014). The Supreme Court has articulated a two-
 7 step test for identifying claims directed to patent-ineligible subject matter. *Id.* First, courts must
 8 “determine whether the claims at issue are directed to a patent-ineligible concept” such as an
 9 abstract idea, law of nature, or natural phenomenon. *Id.* at 218. Second, if so, courts must
 10 “consider the elements of each claim both individually and as an ordered combination to
 11 determine whether the additional elements transform the nature of the claim into a patent-eligible
 12 application.” *Id.* at 217 (internal quotation marks and citation omitted).

13 In *Alice*, the Supreme Court made clear that “the mere recitation of a generic computer
 14 cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Id.* at 223.
 15 “[I]f a patent’s recitation of a computer amounts to a mere instruction to implement an abstract
 16 idea on a computer, that addition cannot impart patent eligibility.” *Id.* (internal citations and
 17 quotation marks omitted). “Nor is limiting the use of an abstract idea ‘to a particular
 18 technological environment’” enough for patent eligibility. *Id.* (quoting *Bilski*, 561 U.S. at
 19 610-11). This rule ensures that abstract ideas are not removed from the public sphere simply
 20 because the idea has a “wholly generic computer implementation.” *Id.*

21 Whether a patent meets the requirements of § 101 is a question of law. *Intellectual*
 22 *Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017). “Patent
 23 eligibility has in many cases been resolved on motions to dismiss or summary judgment.”
 24 *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018), *cert. denied*, 140 S. Ct. 911 (2020).
 25 While § 101 inquiries “may contain disputes over underlying facts, . . . not every § 101
 26 determination contains genuine disputes over the underlying facts material to the § 101 inquiry.”
 27 *Id.* Thus, when patents are directed to an abstract concept and there are no genuine, underlying
 28 factual disputes, district courts regularly grant summary judgment motions under § 101, and the

1 Federal Circuit affirms those decisions. *See, e.g., BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d
 2 1281 (Fed. Cir. 2018); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307 (Fed. Cir.
 3 2016).

4 **3. The '321 Patent Is Directed to an Abstract Idea**

5 The '321 patent is directed to the unpatentable, abstract idea of associating (“mapping”)
 6 database tables and OLAP cubes with respective classes for use with application programs.
 7 Although the claims also recite generic, conventional computer data structures (such as tables and
 8 OLAP cubes), generic software application programs, and generic steps such as processing data
 9 and providing analysis to a user, SAP did not purport to invent these elements, and they do not
 10 add to patentability. This is not a case in which an accused infringer seeks to oversimplify a
 11 patent’s claims in the search for an abstract idea. SAP’s own expert described the patent as
 12 follows:

13 The '321 patent relates to ways to organize the tables and cubes
 14 used in databases so that they can be more easily and efficiently
 15 recognized and accessed. At a high level this organization is
 16 accomplished by assigning a table or cube to a particular class.
 These classes serve to group data structures storing related data, so
 an application can access the structures together.

17 D. Maier Rebuttal Rpt., (Swoopes Decl. Ex. A) ¶ 683.

18 As explained below, the “mapping” to classes at the heart of the '321 patent is simply a
 19 practice of organizing information, a type of activity that courts have held to be abstract and
 20 ineligible for patent protection.

21 **a. Courts Have Found that Collecting, Organizing, and Presenting Information Is an Abstract Idea**

22 Step one of the *Alice* test determines whether the claims’ “character as a whole is directed
 23 to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346
 24 (Fed. Cir. 2015). In other words, courts look at the “focus” or “basic thrust” of the claims. *Elec.*
 25 *Power Grp. LLC v. Alston S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). While “there is no ‘single,
 26 universal’ definition of an abstract idea,” courts look to Section 101 cases with similar factual
 27 scenarios as “helpful guideposts.” *Voip-Pal.com, Inc. v. Apple, Inc.*, No. 12-CV-06216-LHK,
 28 411 F. Supp. 3d 926, 951 (N.D. Cal. 2019), *aff’d*, 828 Fed. Appx. 717 (Fed. Cir. 2020) (quoting

1 *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016)).

2 For example, courts have found the following claims directed to various acts of collecting,
3 organizing, and presenting data to be abstract ideas under *Alice* step one:

- 4 • Systems for manipulating XML documents by organizing data components into
5 data objects and records and responding to modifications of the data, *Capital One*,
6 850 F.3d at 1340–41;
- 7 • Systems and methods for performing real-time monitoring of an electric power
8 grid by collecting data from multiple data sources, analyzing the data, and
9 displaying the results, *Elec. Power Grp.*, 830 F.3d at 1351; and
- 10 • Systems and methods for “organizing and accessing records through the creation
11 of an index-searchable database,” *Intellectual Ventures I LLC v. Erie Indemnity*
12 *Co.*, 850 F.3d 1315, 1327 (Fed. Cir. 2017).

13 As explained below, the claims of the ’321 patent fall squarely within the realm of subject
14 matter that courts have found is directed to abstract ideas.

15 **b. The Claims of the ’321 Patent Involve Collecting, Organizing,**
16 **and Presenting Information**

17 Imagine that it is the middle of the twentieth century and someone purchases a business.
18 The new owner discovers that the business has many boxes of preexisting records stored in a
19 warehouse. These records might take various forms, including ledgers, purchase orders, and
20 paystubs, among others. To get the records to employees who can actually make use of them, the
21 owner hires a file clerk who inventories the records and organizes them into logical groups.
22 There is one set of records for the accounting manager, another set of records for the procurement
23 manager, and another set of records for the human resources manager. The file clerk creates a
24 table that maps out which records are intended for each department manager, and the managers
25 can use this table to find records that are relevant to them.

26 In 2003, SAP took the above concept of organizing information into logical groups and
27 applied it to an electronic data warehouse to arrive at the ’321 patent. Claim 1 recites taking
28 preexisting data structures in the form of database tables and OLAP cubes and “mapping” them to

1 “at least one class” of tables or cubes, respectively. The Court’s claim construction order defined
2 “mapping” as “creating and storing, in computer system memory or secondary storage for a
3 computer system, an association between data elements in the computer system such that a
4 computer can locate a data element using that association.” ECF No. 279 at 22. Claim 1 does not
5 require any specific structure for associating database tables and cubes to classes; it merely recites
6 acts of “mapping.”

7 Moreover, there is nothing specific in the claim language about the nature of these
8 “mappings” or these “classes.” They are purely a function of a user’s choice to develop a data
9 model that makes sense for a particular business application. For example, “there may be
10 database tables of the entity type ‘accounts,’ which contain the account numbers of customers and
11 vendors. Further, database tables of entity type ‘organizational unit’ may contain the legal entities
12 of a company or the organizational units of the company from a business structure perspective.”
13 ’321 patent, 1:65-2:3. “[A] class of database tables may contain database tables having a
14 common entity type.” *Id.*, 2:6-7. For cubes, “there may be OLAP cube classes for performing
15 different kinds of transactional data processing, such as ‘investment,’ ‘equity,’ or ‘goodwill’
16 transactional data processing.” *Id.*, 2:20-23. The “mapping” of the ’321 patent simply relates to
17 creating “mappings” that make sense to a particular user.

18 Courts have repeatedly held that the act of mapping or classifying data elements is an
19 abstract idea. For example, in *Capital One*, the Federal Circuit considered a claim that recited,
20 among other things “a component that maps the data components of each data object to one of the
21 plurality of primary record types.” 850 F.3d at 1339. The Court held that “the patent claims are,
22 at their core, directed to the abstract idea of collecting, displaying, and manipulating data.” *Id.* at
23 1340. One district court went so far as to conclude that “it would be difficult to conceive of a
24 more abstract concept than ‘mapping’ when that concept is not tied to any particular object or
25 method.” *East Coast Sheet Metal Fabricating Corp. v. Autodesk, Inc.*, No. 12-cv-517, 2015 U.S.
26 Dist. LEXIS 5536, at *15, (D.N.H. Jan. 15, 2015), *aff’d*, 645 Fed. App’x 992 (Fed. Cir. 2016).
27 Like the claims at issue in *East Coast*, the claims of the ’321 patent do not specify any particular
28 method for “mapping.”

1 Similarly, in *TLI*, the Federal Circuit held that claims directed to “classifying and storing
 2 digital images in an organized manner” were not eligible for patent protection. *In re TLI*
 3 *Commc’ns LLC Patent Litig.*, 823 F.3d 607, 609 (Fed. Cir. 2016). Here, SAP’s claims relate to
 4 classifying data structures, that is, mapping the data structures to classes, in an organized manner.
 5 *TLI* also provides a response to any argument by SAP that other claim elements, such as the
 6 claimed tables, OLAP cubes, application programs, or mapping table make the claims concrete.
 7 The *TLI* court found that while one challenged claim “requires concrete, tangible components
 8 such as ‘a telephone unit’ and a ‘server,’ the specification makes clear that the recited physical
 9 components merely provide a generic environment in which to carry out the abstract idea of
 10 classifying and storing digital images in an organized manner.” *Id.* at 611. Similarly, here, the
 11 data warehouse elements described in the claims of the ’321 patent simply provide a generic
 12 environment in which to carry out the abstract idea of mapping data structures to classes.

13 Nor do the steps of filling an OLAP cube with data, processing the data, or providing
 14 analysis to a user impart patentability. *See, e.g., Elec. Power Grp.*, 830 F.3d at 1354 (holding that
 15 claims directed to “gathering and analyzing information of a specified content, then displaying
 16 the results” were directed to an abstract idea). Filling an OLAP cube is simply a data gathering
 17 step. “Processing” data, without specifying an algorithm, is so abstract as to almost be
 18 meaningless. And “providing analysis” is the exact sort of step that the case law has found to be
 19 an abstract idea.

20 **c. The ’321 Patent Does Not Improve Computer Technology**

21 The ’321 patent does not provide “an improvement to computer functionality.” *Enfish*,
 22 *LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335, 1339 (Fed. Cir. 2016) (upholding claims relating to
 23 a new self-referential table, which was “a specific type of data structure designed to improve the
 24 way a computer stores and retrieves data in memory”). Unlike the system at issue in *Enfish*, the
 25 claims of the ’321 patent do not define any new data structures. Data warehouses, relational
 26 database tables, and OLAP cubes were admittedly in the prior art. *See, e.g., ’321 patent*, 1:13-14,
 27 1:25-27 (“An OLAP cube is a multi-dimensional representation of a set of data. Such a cube is
 28 the basis for transaction data storage in prior art data warehouse systems.”). The same holds true

1 for application programs. *See id.*, 1:22-24 (“OLAP services typically provide analytical tools to
2 rank, aggregate, and calculate lead and lag indicators for the data under analysis.”)

3 Even if the purported invention does help users retrieve data, that alone is not a patentable,
4 technological improvement. As this Court recently explained, “[t]he mere fact that an idea or
5 process solves a problem or proves useful in a particular industry does not make it patent
6 eligible.” *Synopsys, Inc. v. Avatar Integrated Sys.*, No. 20-cv-04151-WHO, 2020 U.S. Dist.
7 LEXIS 212877, at *19 (N.D. Cal. Nov. 12, 2020) (citing *SAP Am., Inc. v. InvestPic, LLC*, 898
8 F.3d 1161, 1163 (Fed. Cir. 2018)).

9 The creation of “mappings,” via mapping tables or some other mechanism, does not save
10 SAP’s claims. SAP may assert that the claimed “mapping” creates an assignment of tables or
11 cubes to classes and allows a computer to retrieve tables or OLAP cubes assigned to a given class
12 to perform actions related to that class. But to the extent that the claims derive their value from a
13 stored “mapping,” the specification makes clear that this value comes from a human’s choice to
14 associate particular tables or cubes with classes, not from a new data structure or technological
15 improvement. *See, e.g.*, ’321 patent, 2:17-23 (“The user may need to classify a selected OLAP
16 cube in order to assign the selected OLAP cube to predefined OLAP cube classes.”); 2:31-35
17 (“[T]he user may be required to enter the name of a database table in a mapping table in order to
18 assign the database table to one of the predefined entity type classes supported by the selected
19 application.”). Numerous additional references demonstrate that the recited “mappings” in the
20 ’321 patent refer to associations chosen by humans. *See* ’321 patent, 2:40-44; 3:61-64; 4:8-19;
21 5:27-30; 5:35-44; 6:11-16.

22 The “mapping table” of claim 4 does not confer patent eligibility. Although the Court
23 construed a “mapping table” as “a computer-implemented data structure that holds associations or
24 assignments,” ECF No. 279 at 22, there is nothing in the claim language or specification that
25 would materially distinguish a computerized mapping table from one that could be created with a
26 pen and paper. And courts have consistently found such claim elements unpatentable. *See, e.g.*,
27 *Symantec Corp.*, 838 F.3d at 1318 (finding patent directed to screening emails for unwanted
28 content invalid because “with the exception of generic computer-implemented steps, there is

1 nothing in the claims themselves that foreclose them from being performed by a human, mentally
 2 or with pen and paper”). Indeed, SAP took a broad view of the “mapping table” limitation for
 3 infringement purposes. SAP’s expert opined that “[a] folder or directory structure stored on a
 4 computer system groups objects and allows them to be located. Such a structure can be
 5 considered a mapping table.” Appx. 3 to Expert Rpt. of D. Maier In Support of SAP SE’s Patent
 6 Infringement Claims (Swoopes Decl. Ex. B) at 32. In other words, according to SAP’s expert, a
 7 folder containing logically related data items is a “mapping table.” And computer “folders”
 8 originated as a metaphor for paper folders.

9 Unlike in *Enfish*, the claims of the ’321 patent are not focused on how the “mapping” or
 10 “mapping table” alters the database in a way that leads to an improvement in computer
 11 functionality. SAP does not assert that the ’321 patent makes queries run faster or reduces
 12 memory usage. Instead, the ’321 patent claims a basic business practice of organizing data to
 13 make it “more user friendly.” ’321 patent, 5:63-65. But “simply adding conventional computer
 14 components to well-known business practices” does not render a claim patent eligible. *Enfish*,
 15 822 F.3d at 1338. In fact, “conventional business practices are often found to be abstract ideas,
 16 even if performed on a computer.” *Smart Authentication IP LLC v. Elec. Arts, Inc.*, 402 F. Supp.
 17 3d 842, 850 (N.D. Cal. 2019) (citing *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362
 18 (Fed. Cir. 2016)). Thus, the focus of the claims remains collecting and organizing information,
 19 which the Federal Circuit has repeatedly found to be abstract.

20 **4. The ’321 Patent Lacks an Inventive Concept**

21 The ’321 patent fails the second step of the *Alice* test because its claims do not contain an
 22 “‘inventive concept,’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible
 23 application.” *Alice*, 573 U.S. at 221. To be patentable, a claim must include “additional features
 24 to ensure that the [claim] is more than a drafting effort designed to monopolize the [abstract
 25 idea].” *Id.* (citations and internal quotation marks omitted). Adding a computer limitation into
 26 the claims does not alter the step two analysis. *Id.* at 222. Instead, “the relevant question is
 27 whether the claims here do more than simply instruct the practitioner to implement the abstract
 28 idea . . . on a generic computer.” *Id.* at 225. As in *Alice*, the relevant answer for the claims of the

1 '321 patent is “no.”

2 Each claim of the '321 patent recites well-known, routine, conventional database elements
3 including tables, OLAP cubes, and application programs and uses these elements to perform well-
4 understood, routine, and conventional functions of collecting, organizing, processing, or
5 analyzing data. Regardless of whether these elements are considered individually or in
6 combination, they do not provide an inventive concept.

7 **a. The Claims Recite Well-Understood, Routine, Conventional**
8 **Database Features**

9 SAP cannot dispute that relational database tables were conventional, known structures.
10 A person of ordinary skill in the art would understand that database tables were ubiquitous in data
11 warehouse systems, and the patent acknowledges that “Online analytical processing (OLAP) is a
12 key part of most data warehouse and business analysis systems.” '321 patent, 1:13-14.
13 Moreover, during claim construction, SAP admitted that transactional data is “typically” stored in
14 tables: “Transactional data, such as records for particular sales, is typically entered or stored in a
15 relational database in rows in a two-dimensional table.” SAP’s Opening Claim Construction
16 Brief, ECF No. 211 at 8 (citing testimony from SAP’s technical expert, ECF No. 211-1 ¶ 46).¹

17 The '321 patent’s specification specifically admits that OLAP cubes were well known in
18 the prior art: “An OLAP cube is a multi-dimensional representation of a set of data. Such a cube
19 is the basis for transaction data storage in prior art data warehouse systems.” '321 patent, 1:25-
20 27.

21 Citing the specification of the '321 patent, SAP also specifically admitted that
22 “[a]pplication programs were well known to the POSITA at the time the '321 patent was filed.”
23 SAP’s Opening Claim Construction Brief, ECF No. 211 at 20 (citing '321 patent, 1:49-51, 3:45-
24 51). To the extent SAP attempts to argue that the “set” of application programs recited in claim 2
25 provides an inventive concept, SAP’s claim construction arguments took the contrary position by
26 citing multiple examples of prior art application programs, including the SAP business

27 ¹ Although this argument was made in the context of the '421 patent, it also holds true for the
28 '321 patent.

1 information warehouse and Microsoft Excel. *Id.* at 21-21. Moreover, SAP argued that these
 2 application programs could provide an “OLAP component” to fill OLAP cubes with data. *See id.*

3 **b. The Remaining, Functional Claim Limitations Are In The**
 4 **Realm Of Abstract Ideas**

5 The remaining claim limitations, including mapping, filling cubes with data, processing
 6 data, and providing analysis are abstract, as explained above, and thus cannot provide an
 7 inventive concept. The Federal Circuit has held that “[i]f a claim’s only ‘inventive concept’ is the
 8 application of an abstract idea using conventional and well-understood techniques, the claim has
 9 not been transformed into a patent-eligible application of an abstract idea.” *BSG Tech LLC v*
 10 *Buyseasons, Inc.*, 899 F.3d 1281, 1290-91 (Fed. Cir. 2018). Because the limitations of mapping,
 11 filling cubes with data, processing data, and providing analysis apply abstract ideas, the court
 12 need not consider “whether [they are] well-understood, routine, and conventional.” *BSG Tech*,
 13 899 F.3d at 1290. *Electric Power Group* is analogous. There, at step two, the court explained
 14 that “merely selecting information, by content or source, for collection, analysis, and display does
 15 nothing significant to differentiate a process from ordinary mental processes, whose implicit
 16 exclusion from § 101 undergirds the information-based category of abstract ideas.” *Elec. Power*
 17 *Grp.*, 830 F.3d at 1355.

18 Here, the steps of mapping tables and cubes to classes, collecting data into OLAP cubes,
 19 and processing and analyzing the data simply reflect abstract mental processes. The claims do
 20 not recite any specific algorithms for performing these steps. They simply claim a result.

21 In any event, all of these steps are also well-understood, routine, and conventional. It has
 22 been conventional since before the application date of the ’321 patent to classify or assign tables
 23 or cubes to logical groupings or classes, each associated with applications for processing. For
 24 example, the figure below from a prior art patent application shows a grouping of tables related to
 25 sales, with a central sales “fact” table surrounded by tables that support the measurement of sales,
 26 including Time, Product, and Region tables.

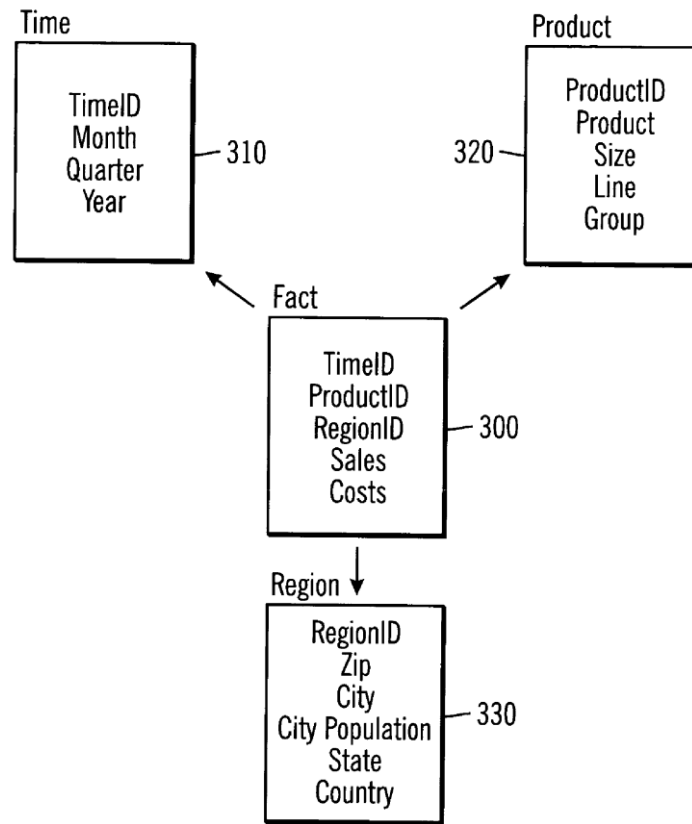
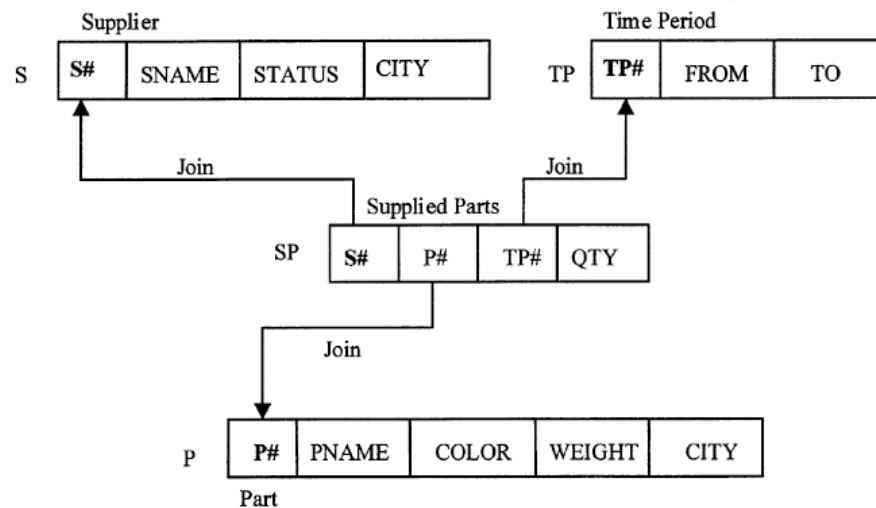


FIG. 3

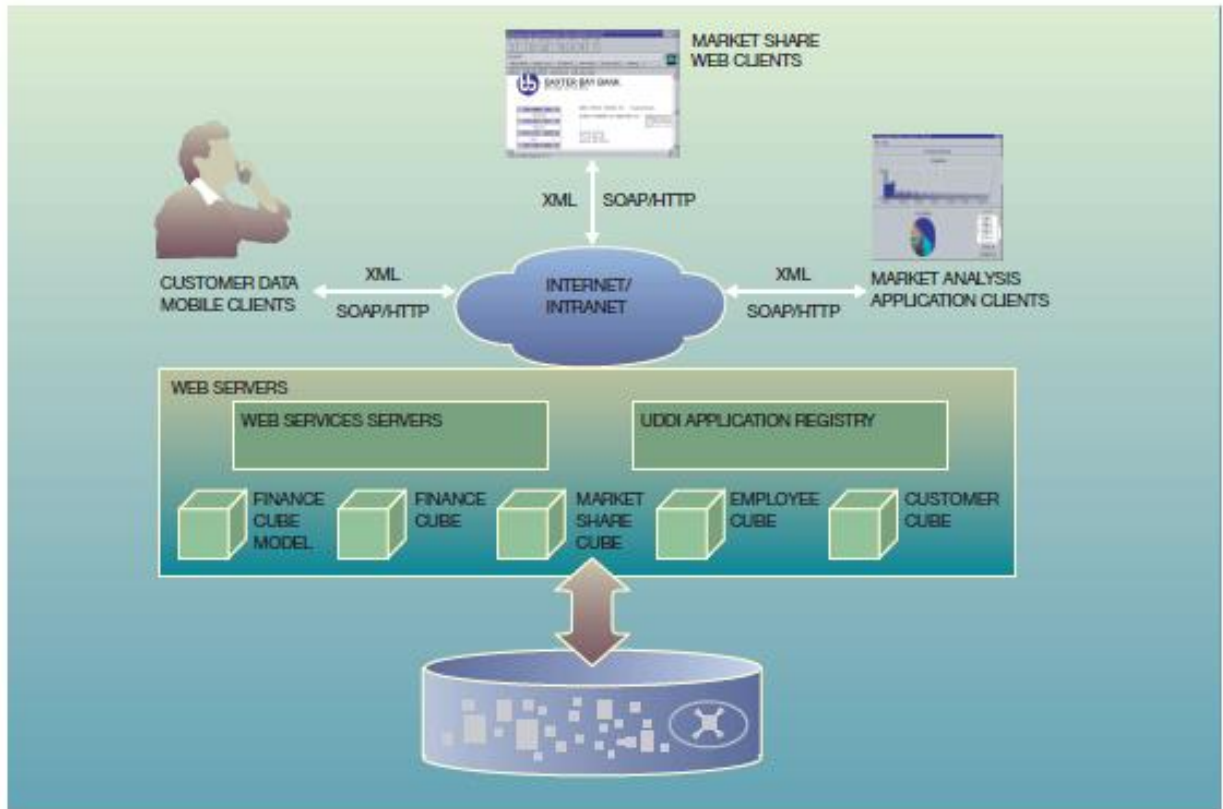
U.S. Patent Application Publication No. US 2004/0139061 (filed Jan. 3, 2003) (Swoopes Decl. Ex. C), FIG. 3. The figure below from U.S. Patent No. 6,385,604 provides an example of another grouping of tables related to Supplied Parts, including Supplier, Time Period, Part, and Supplied Parts tables:



U.S. Patent No. 6,385,604 (issued May 7, 2002) (Swoopes Decl. Ex. D) FIG. 4A.

Similarly, the figure below shows an OLAP cube labeled “Finance Cube” next to its associated “Finance Cube Model,” which represents a class of cubes related to finance.

Figure 1 Application scenario



N. Colossi et al., “Relational extensions for OLAP,” IBM Systems Journal., 41(4):714–731 (2002) (Swoopes Decl. Ex. E), FIG. 1. The “Finance Cube” and the other examples of cubes depicted in the figure above are the same sorts of cubes described in the ’321 patent: “For example, class I may contain OLAP cubes which are used for financial transactional data storage and processing, whereas OLAP cube class II may contain OLAP cubes which are used for real estate type transactional data storage and processing.” ’321 patent, 5:15-20; *see id.*, 5:12-15. The figure from the Colossi article above also shows various application programs that can be used with different tables and cubes, including customer data mobile clients, market share web clients, and market analysis application clients.

As for “invoking an [OLAP] component to fill [OLAP] cubes with transactional data,” in attempting to overcome arguments that the limitation of claim 4 reciting this phrase is indefinite,

1 SAP's expert argued that software to carry out this function was well known. He asserted: "Some
 2 examples of such applications, familiar to a skilled artisan when this patent application was filed,
 3 include various BI Tools such as Microsoft Excel, BusinessObjects and Tableau." D. Maier
 4 Rebuttal Rpt. (Swoopes Decl. Ex. A) ¶ 701; *see id.* ¶ 704.

5 Dr. Maier also argued that application programs for "processing the entities stored in the
 6 sub-set of database tables and the transactional data stored in the sub-set of [OLAP] cubes" were
 7 well known. He asserted: "Some examples of such components and applications, familiar to a
 8 skilled artisan when this patent application was filed, include various BI Tools such as Microsoft
 9 Excel, BusinessObjects and Tableau." *Id.* ¶ 712; *see id.* ¶ 715.

10 Finally, to overcome yet another indefiniteness argument, SAP's expert argued that
 11 software to carry out "providing analysis . . . to a user" was well known. He argued: "Some
 12 examples of such structures, familiar to a skilled artisan when this patent application was filed,
 13 include various BI Tools such as Microsoft Excel, BusinessObjects and Tableau." *Id.* ¶ 719.

14 Because each claim element of the '321 patent, taken individually or as a combination,
 15 recites well-known, routine, conventional database elements and/or recites the application of an
 16 abstract idea, there can be no dispute that the '321 patent fails to claim an inventive concept.

17 * * *

18 Because the '321 patent is directed to an abstract idea and contains no inventive concept,
 19 the Court should grant summary judgment and dismiss SAP's counterclaim alleging that Teradata
 20 infringes the '321 patent.

21 **B. SAP Cannot Recover Damages for the '179 and '421 Patents Before**
 22 **May 21, 2019**

23 SAP improperly seeks reasonable royalties for the '179 and '421 patents for periods
 24 before May 21, 2019, which is the date SAP gave Teradata notice of its infringement claims.
 25 Undisputed facts show that SAP's request is contrary to law. The question of SAP's legal ability
 26 to recover damages before notice can be resolved under Rule 56, and SAP bears the burden of
 27 proof to show it marked or gave notice. *Contour IP Holding, LLC v. GoPro, Inc.*, No. 3:17-cv-
 28 04738-WHO, 2020 U.S. Dist. LEXIS 158184, at *21-24 (N.D. Cal. Aug. 31, 2020).

1 SAP's disclosures and discovery responses establish all of the following facts:

2 First, SAP sold before the notice date and currently sells at least one product that practices
3 the alleged invention of the '179 patent – a product previously known as Sybase Adaptive Server
4 R. Anywhere (currently referred to as SAP SQL Anywhere). *See* Counterclaim-Plaintiff SAP
5 SE's Disclosures Pursuant to Patent L.R. 3-1 and 3-2 (Aug. 19, 2019) ("SAP Infringement
6 Contentions"), ECF No. 406-2 at 6; SQL Anywhere sales data, SAP_27152350 (Swoopes Decl.
7 Ex. F).

8 Second, SAP sold before the notice date and currently sells at least the following products
9 that practice the alleged invention of the '421 patent: SAP Business Warehouse and SAP
10 Business ByDesign.² *See* SAP Infringement Contentions, ECF No. 406-2 at 6; SAP BW sales
11 data, SAP_27152345 (Swoopes Decl. Ex. G); SAP Business ByDesign sales data,
12 SAP_27152346 (Swoopes Decl. Ex. H).

13 Third, SAP did not mark its products with the '179 or the '421 patent numbers. *See*
14 Defendants' Responses and Objections to Teradata's First Set of Requests for Admission (Nos. 1-
15 118) (May 14, 2020) (Swoopes Decl. Ex. I) at 36-37, Responses Nos. 56 and 58; SAP
16 Infringement Contentions, ECF No. 406-2 at 9; SAP SE's Supplement to Patent L.R. 3-8
17 Damages Contentions, ECF No. 405-7³ at 16-18.

18 And fourth, SAP first gave Teradata actual notice of the alleged infringement of the '179
19 and '421 patents on May 21, 2019. *See* Defendants' Responses and Objections to Teradata's First
20 Set of Requests for Admission (Nos. 1-118) (May 14, 2020) (Swoopes Decl. Ex. I) at 38-40,
21 Responses Nos. 61 and 63; SAP SE's Supplement to Patent L.R. 3-8 Damages Contentions, ECF
22 No. 405-7 at 16-18.

23 Under 35 U.S.C. § 287, a patent holder who makes a product that uses a patented
24 invention may mark the product with the patent number. "In the event of failure so to mark, no
25

26 ² There is a dispute over whether SAP properly disclosed (or even used) the alleged invention of
27 the '421 patent in HANA. That debate is of no significance to this motion because SAP had
28 already disclosed its use of the alleged invention in the two products identified above.

³ The Court's May 5, 2021 Order directed the Clerk to unseal the document at ECF No. 405-7,
but as of the drafting of this Motion, it remained under seal. ECF No. 418 at 3.

1 damages shall be recovered by the patentee in any action for infringement, except on proof that
 2 the infringer was notified of the infringement and continued to infringe thereafter, in which event
 3 damages may be recovered only for infringement occurring after such notice.” *Id.*; *see also*
 4 *Fujifilm Corp. v. Motorola Mobility LLC*, No. 12-cv-03587-WHO, 2015 U.S. Dist. LEXIS 46106,
 5 at *50 (N.D. Cal. Apr. 8, 2015) (“The law is clear that, absent marking, damages may not be
 6 recovered for infringement occurring before the infringer was notified of the infringement.”)
 7 Actual notice requires the affirmative communication of a specific charge of infringement by a
 8 specific accused product or device. *Arctic Cat Inc. v. Bombardier Rec. Prods. Inc.*, 950 F.3d 860,
 9 864 (Fed. Cir.), *cert. dismissed*, 141 S. Ct. 753 (2020). Here that did not occur before May 21,
 10 2019.

11 The limitation on damages applies to method claims where, as here, a patent holder asserts
 12 both method and apparatus claims from the same patent in its lawsuit. *ActiveVideo Networks,*
 13 *Inc. v. Verizon Communs., Inc.*, 694 F.3d 1312, 1334 (Fed. Cir. 2012) (“if a single patent contains
 14 both apparatus claims and method claims, the marking requirement applies to all the claims”); *see*
 15 *also Am. Med. Sys., Inc. v. Med. Eng'g Corp.*, 6 F.3d 1523, 1538-39 (Fed. Cir. 1993) (same);
 16 *Unwired Planet, LLC v. Apple Inc.*, No. 13-cv-04134-VC, 2017 U.S. Dist. LEXIS 20935, at *13-
 17 14 (N.D. Cal. Feb. 14, 2017) (“the rule reaffirmed [by the Federal Circuit] turns on the claims
 18 asserted, not the claims still active at or after summary judgment.”). The ’179 and ’421 patents
 19 contain both apparatus and method claims, and SAP has asserted both in this case. (*See* ECF
 20 Nos. 123, 124, 124-3, 363.)

21 In light of the undisputed facts, SAP cannot recover damages for any infringement of
 22 either the ’179 or ’421 patent before May 21, 2019. The Court should issue an order confirming
 23 the same.

24 **IV. CONCLUSION**

25 For the foregoing reasons, the Court should grant Teradata’s motion for summary
 26 judgment. Teradata requests that the Court declare the asserted claims of the ’321 patent invalid
 27 under 35 U.S.C. § 101 and rule that SAP cannot recover damages for any infringement of either
 28 the ’179 or ’421 patent before May 21, 2019.

1 Dated: August 25, 2021

MORRISON & FOERSTER LLP

2
3 /s/ Mark L. Whitaker

Mark L. Whitaker

4 Attorneys for Plaintiffs and
5 Counterclaim-Defendants
6 TERADATA CORPORATION,
7 TERADATA US, INC., and TERADATA
8 OPERATIONS, INC.
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28